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The need for technicians and attendants in veterinary medicine was examined to determine the necessity of implementing training programs. Returns from 215 licensed veterinarians were obtained from the 692 surveyed. Some findings were: (1) The largest number of job vacancies were reported for animal technician graduates at the associate degree level, (2) The second largest number of job vacancies were reported for small animal hospital attendants, (3) Salaries reported for animal technicians were low, and (4) There was strong support for licensing and registering animal technicians. Recommendations included: (1) the formal establishment and recognition of the occupational titles and descriptions for animal technicians and small animal hospital attendants, (2) implementation of a system of certifying, registering, or licensing qualified animal technicians, and (3) development of educational and training program curricula based on national guides, standards, and objectives, and (4) that veterinarians be advised of salaries received by comparable level technicians. (DM)

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INDIANA'S NEED for ASSISTANTS in VETERINARY MEDICAL PRACTICE.

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15 MAY 1968

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INDIANA'S NEED FOR ASSISTANTS IN VETERINARY MEDICAL PRACTICE

This manpower report includes the results of research and a survey designed to acquire data concerning:

I. The titles, descriptions, duties, and qualifications of occupations below and supporting professional veterinarians; viz. animal technicians, small animal hospital attendants, livestock health attendants, and others;

II. The numbers of these auxiliaries that are now employed, the numbers of current job vacancies, and the numbers that will be needed in the future;

III. The approximate monthly salaries;

IV. Their training in accredited programs;

V. The need for licensure or registration, and the most appropriate methods applicable to each occupation;

VI. Related conclusions and recommendations by the authors.

* * * * *

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Dr. Eber H. Allen, D.V.M., past president of the Indiana Veterinary Medical Association (IVMA),

Dr. Stanley J. Bower, D.V.M., Treasurer of IVMA and Associate Professor of Veterinary Science at Purdue University, and

Herbert M. O'Neill, Research Assistant, Purdue University.

Note: Copies of this report - and those listed on page 30, are available at $1.50 each (Indiana Government and Educational Offices exempted).

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CHAPTER I

PURPOSE and DESCRIPTION of the REPORT

1. Introduction and Purpose

The fact is - that the skills and effectiveness of professionals in many fields are being extended by the utilization of assistants or specialized auxiliaries, i.e. technicians or attendants. However, veterinarians have variant ideas and mixed emotions regarding this subject. The question is - are there sufficient numbers of practicing veterinarians in general agreement as to the need for auxiliaries in order to plan and implement necessary actions? This article presents how Indiana veterinarians answered this question - and other related questions.

In the development of the rationale and methodology to obtain data concerning this question and plan related actions, it was recognized that the following considerations had to be included:

1. Practicing veterinarians, both as individuals and as members of a professional cooperative body must be involved: their advice and concurrance are essential.
2. Assistants have to be properly identified with official job titles and their duties and functions clearly delineated.
3. Necessary accredited - or properly recognized - educational or training programs have to be developed.
4. These auxiliaries might have to be, in a sense, "controlled". For example, the adequacy of their training and their qualifications would have to be assured and recognized. A system of certification or registration and/or licensure might be necessary in order to ascertain that only qualified individuals are recognized, and their roles in veterinary medicine are clearly understood by all concerned. The training programs must achieve prescribed objectives and be subject to professional evaluation for accreditation.
5. There must also be a sufficient number of job opportunities, full utilization and adequate pay.

Another fact bearing on this problem is the lack of adequate occupational titles and descriptions in the Dictionary of Occupational Titles[1] or the Occupational Outlook Handbook.[2] A review of these references was made with representatives from the Indiana Veterinary Medical Association.

The purpose of this report is to present the results of a survey of Indiana veterinarians' ideas concerning the need for these auxiliaries;

[1]Refers to reference number in Selected Bibliography, on page 29.

their job titles and duties, functions, and qualifications; salary matters; needs (manpower requirements - present and future); registration or licensure, and comments or suggestions. The authors' analyses and recommendations are also presented.

2. Survey Rationale and Methodology

It was reasoned that if the descriptions and conditions described in Section 1 were agreed to, veterinarians would be more likely to support related actions. Also, the necessary steps could be identified and facilitated in the development of needed educational and training programs.

The Board of Directors of the Indiana Veterinary Medical Association and representatives of the Purdue University School of Veterinary Science and Medicine, and the Office of Manpower Studies decided to meet the problem head on. A survey and letter explaining the need to recognize the problem and agree to the occupational definitions, qualifications, and control of auxiliaries was sent to every veterinarian in Indiana. The general theme was that working together, veterinarians could indeed extend their skills and effectiveness through the utilization of properly identified, trained, and controlled assistants.

3. Format of the Report

The first chapter explains the purpose of this report and briefly describes the methodology used and the format. The next chapter describes the survey package and presents the questionnaire results. Some pertinent observations are made by the authors for each set of data. Chapter three contains the conclusions and recommendations of the authors. Appendices, numerous statistical tables, and a selected bibliography and notes, are included with this report.

CHAPTER II

DESCRIPTION, DISTRIBUTION, and RESULTS of SURVEY

4. Description of the Survey Package

The survey package was made up of three parts: a letter of transmittal, a description of the auxiliary occupations, and a questionnaire.. a self-addressed return envelope was also enclosed. Please see Appendix I for a sample copy. A brief discussion of each follows:

A Letter of Transmittal that explained the problem and nature of this study -- and solicited the cooperation of each veterinarian, was printed on the letterhead stationery of the Indiana Veterinary Medical Association (IVMA). It was signed by Dr. Eber Allen, D.V.M., then president of the IVMA and mailed out in February, 1968.

Occupational Descriptions - the survey instrument presented as a point of departure, an occupational matrix of two job levels below the professional or veterinarian as follows:

Occupational Matrix

	Field of Work and Title	
Occupational Level	(Urban) Small Animal	(Rural) Large Animal
Sub-Professional*	Animal Technician	Animal Technician
Skilled Worker**	Small Animal Hospital Attendant	Livestock Health Attendant

*Normally, the graduate (or equivalent) of an accredited two-year college level (Associate Degree) educational program.

**Normally, the graduate (or equivalent) of a 6 to 9 months technical or vocational training program...post-high school level.

Due to the inadequacies of the occupational titles and descriptions for veterinary auxiliaries in the Dictionary of Occupational Titles, proposed titles and definitions were included in the survey. Very briefly, Animal Technicians[3] would perform duties (under the direct supervision of a veterinarian) such as recording vital information; preparing animals, equipment, and medicines for surgery; exposing radiographic film; preparing medicants and/or administering hypodermic injections and medications; assisting in giving anesthetics; administering colonic irrigations, applying or changing wound dressings, and assisting the veterinarian as directed.

These duties and responsibilities are generally consistent with recent policy recommendations of the American Veterinary Medical Association.[4]

Some examples of the duties of Small Animal Hospital Attendants would include feeding and watering animals, cleaning, repairing cages and equipment, keeping records, spraying insecticides and pesticides and spreading powder, operating autoclaves, sterilizing surgical instruments, etc., preparing germicidal solutions and doing other assigned duties. Examples of activities of the Livestock Health Attendant would include holding or restraint of animals on farm, grooming and attending patients, cleaning and sterilizing instruments, syringes, etc. Some laboratory examinations and other duties might be performed as directed by the veterinarian.

Note: The survey respondents were given the opportunity to indicate any other assistant's occupation or job they utilized or recommended.

Questionnaire - following the explanation of the suggested occupations with duties and qualifications, each veterinarian was asked to identify his kind of practice - specifically, large animal, small animal, mixed, or other category. A series of questions, arranged in three parts, was then asked of each veterinarian.

Part I concerned manpower requirements, viz. number now employed in each occupation, present number of job vacancies, and the number needed from outside training sources in the future. The salary for these auxiliaries and questions concerning the adequacy of the proposed occupational titles and descriptions were included in Part I. In Part II, each veterinarian was asked for his opinion as to whether or not these auxiliaries should be licensed - and if so, the best method(s) to be used. Part III simply asked each respondent if he had any comments or recommendations concerning the survey or the study.

5. Survey Distribution and Return

Distribution by Type of Practice

A survey mailing list for 692 practicing veterinarians within the State of Indiana was compiled by Dr. Stanley J. Bower, Treasurer of the Indiana Veterinary Medical Association. There were 215 survey instruments returned - representing a response of 31.1%. The distribution and response, by type of practice, is shown in the table on the next page.

Table 1

Distribution and Returns of Veterinarians Surveyed by Type of Practice

Type of Practice	Number Surveyed	Number Responding	Percent Return
Large animal practitioners	48	10	20.8%
Mixed practitioners	275	86	31.3%
Small animal practitioners	115	66	57.4%
Other classes	254	53	20.9%
Institutional veterinarians such as professors, educators, etc. 138			
Public Health 6			
Regulatory veterinary medicine 35			
Military 13			
Unknown 62			
	Σ 692	Σ 215	$\bar{x}$ 31.1%

It is clear from Table I that the general findings developed from these returns largely represent the opinions of veterinarians in mixed or small animal practice. The 10 responses (and comparatively lower percentage response) of large animal practitioners raise doubt as to the validity of this aspect of the study.

6. Survey Results

The main parts of the data from survey returns may be grouped into five categories as follows:

a. Quantitative manpower requirements,
b. Salary matters,
c. Proposed occupational titles and definitions,
d. Licensure of auxiliaries, and
e. General comments and suggestions.

Data for the above categories and discussion of each are presented in the paragraphs following:

Quantitative Manpower Requirements. The respondents were asked how many auxiliaries they now employed and how many job vacancies they had. They were also asked to project their estimated future requirements.

Although there were nearly twice as many small animal hospital attendants reported as now being employed than there were animal technicians, there were more than twice as many reported job vacancies for

technicians as there were for attendants. See Table 2. The reported shortage of animal technicians is understandable, inasmuch as they are at the two-year college level of qualification - and there is no such program now being conducted in Indiana. The lesser number of vacancies at the lower training levels (viz. 6 to 9 months) reflect the ability of veterinarians to train these auxiliaries themselves, or hire people who have some related experience, skills and understandings.

Table 2

Number of Jobs and Vacancies

Occupation	Number Employed	No.of Job Vacancies
Animal Technician*	77	32
Small Animal Hospital Attendant**	128	14
Livestock Health Attendant**	13	1
Other***	39	1

Insofar as projected requirements were reported, as shown in Table 3, it is interesting to note that more small animal hospital attendants will be needed in the future than animal technicians (which is consistent with the current employment as depicted in Table 2). However, proportionately, more animal technicians are needed each year from outside training sources than for any other auxiliary occupation. Also noteworthy is the fact that without exception, a growing requirement is reported for each passing year: it appears there is a growing optimism for gainful utilization of these auxiliaries as a function of time. The number needed each year - and the average annual recurring requirement for filling existing job vacancies and meeting these needs are shown in Table 3, on the next page.

*Graduates of a 2-year Associate in Applied Science Degree college program.

**Graduates of a 6 to 9 months post-high school vocational technical training program.

***Mostly receptionist-type duties, often in combination with other responsibilities.

Table 3

Number of Auxiliaries Needed in Future Years

Occupation	Number Needed in 1968	1969	1970	Total Average Annual* Recurring Requirement
Animal Technician	33	41	53	53
Small Animal Hospital Attendant	33	58	71	59
Livestock Health Attendant	1	4	5	4
Other	4	5	7	6

The average annual recurring requirements as reported for animal technicians and for small animal hospital attendants appear to warrant the establishment of related educational and training programs. The reported needs for livestock health attendants and others (largely receptionists duties in combination with other veterinary-assistant duties) are comparatively small.

Note: The above computations reflect only the survey respondent's needs - which represent 31.1% of all those surveyed. To expand to the universe of all practicing veterinarians in Indiana (assuming their needs are similar to those of the survey respondents), the requirements would have to be tripled.

Salary Matters. Each survey respondent was asked to indicate the approximate monthly salary he would pay for each of the three auxiliary occupations. The distribution, monthly average salary, and the mode and median for each occupation are presented in Table 4 on the next page.

*The formula applied is:

Total annual recurring requirement = RV + RTE

where $RV = \frac{NV}{3}$ (allowing current vacancies to be filled over a three year period)

Defined by:
RV = Total Annual Requirement to fill Vacancies for that Occupation
NV = Numbers of reported job Vacancies (from Table 2)
RTE = Total annual Requirements to meet job Turnover and Expansion (from Table 3)

Table 4

Distribution of Salaries by Occupation
(Dollars per month)

Occupation \ Salary	$200<	$201 ↓ 250	251 ↓ 300	301 ↓ 350	351 ↓ 400	401 ↓ 450	451 ↓ 500	501 ↓ 550	>551
Animal Technician	1	7	11	11	16	10	11	1	2
Small Animal Hospital Attendant	9	17	16	9	13	3	1	0	1
Livestock Health Attendant	1	1	2	2	3	0	2	0	2
Other	3	1	6	0	2	0	1	0	0

Animal Technician
$\bar{x}$ = $380
mode = $351-400
median = $351-400

Small Animal Hospital Attendant
$\bar{x}$ = $304
mode = $201-250
median = $251-300

Livestock Health Attendant
$\bar{x}$ = $401
mode = $351-400
median = $351-400

Other
$\bar{x}$ = $290
mode = $251-300
median = $251-300

The average monthly salary of animal technicians was reported to be $380 per month (or $4,560 per annum). This is quite low when compared to other "auxiliaries" at a comparable level. For example, in the field of Nursing, the following data have been obtained from Mrs. Helen Johnson, Head, Department of Nursing, School of Technology, Purdue University:

1. In the city of Lafayette, (pop. 48,000) Registered Nurses (recent graduates of the two-year Associate Degree Program) are receiving $460.00 a month. In the city of Indianapolis, (pop. 540,000) these beginning nurses are receiving $550.00 per month.

2. The American Nurse's Association recommends a beginning salary of $6,500 per annum ($541.66 a month).

3. The Veteran's Administration offers a starting salary of $6,957 per annum ($579.66 a month) for graduate nurses with no experience - with a 4½% increase in salary schedules for July, 1968.

Note:
1. The median of a frequency distribution of n numbers is the middlemost value.
2. The mode of a frequency distribution of n numbers is the value which occurs most frequently.
3. The mean ($\bar{x}$) is the arithmetic average of the reported (obtained) values.

Although the highest average salary was reported for the livestock health attendant, it should be noted that relatively few veterinarians submitted an estimate for this occupation.

Proposed Occupational Titles and Definitions. The occupational titles and definitions used in the survey (see Appendix I) appear to be quite satisfactory; 150 of the survey respondents agreed to them completely, 21 did not agree fully. Most of the latter group made minor suggestions as to making the definitions adequate. For example, in answer to the question, "...how do you suggest occupational titles or descriptions be changed or improved?" 7 veterinarians reported they would like the animal technician category changed to include the word "veterinary" such as Veterinary Nurse or Veterinary Technician. There was a scatter of suggestions for a few different titles, but no common trend appeared for new titles or duties* with the exception of a variety of receptionist-combination jobs as written in by survey respondents (see Tables 2 and 3). There were very few specific new job titles for auxiliaries suggested. It should be noted however, that there were only 48 large animal practitioners surveyed with 10 responses - therefore, this aspect of auxiliaries occupations may be unconclusive. (However, there were also 275 mixed practice veterinarians with 86 responding.) Please see Table 1 for details.

Licensure and Qualifications of Animal Technicians and Attendants. The large majority of respondents (143) replied Yes to the question "Do you believe any of these auxiliaries should be licensed by the State of Indiana?" (A number of comments indicated a preference for "registration" or "certification" rather than licensure.) The table below reflects the specific answer tabulations:

Table 5

Required Licensure by Occupations

	Licensure Required	
Occupation	Yes	No
Animal Technicians	143	1
Small Animal Hospital Attendants	32	86
Livestock Health Attendants	29	76
Other	0	24

*The survey respondents were given the opportunity to write in any other occupation or job they utilized or recommended.

There is a clear consensus that veterinarians want animal technicians "under control" more so than any other auxiliary occupation. As stated above, there is also support for certification or registration in lieu of licensure for these animal technicians. Slightly more than a third in each case also believed that attendants should be licensed as well.

Understandable variations occurred in the methods preferred to determine or assure qualifications for occupational readiness. Table 6 reflects the specific responses to the question "Which of the following methods of determining qualifications do you believe are the most applicable in each occupation?" (More than one answer could be checked.)

Table 6

Methods of Determining Auxiliaries Qualifications

Occupation	State Board Exam	Graduate of Accredited Program	Recommendation of Graduate Veterinarian
Animal Technician	78	128	32
Small Animal Hospital Attendant	12	40	44
Livestock Health Attendant	10	33	38
Other	1	2	3

Table 6 indicates a strong desire to employ graduates of accredited educational programs (animal technicians in particular). It is quite logical that the recommendation of a veterinarian appears to be more adequate as the prime requisite for the lower level attendant occupations; whereas, graduation of an accredited program and passing State Board Exams are deemed more appropriate for the animal technicians. In the comments written in by responding veterinarians, 15 recommended application of the "Grandfather Clause"* and 5 suggested that there be a prerequisite for animal technicians of either experience or internship with a veterinarian.

Selected Comments and Suggestions of Respondents. There were nearly 50 separate letters or special comments submitted with the 215 completed questionnaires. The rank order of these comments - as they applied to the auxiliary occupations was as follows:

*e.g., any person presently employed as a veterinary auxiliary and recommended as such by a practicing veterinarian would be exempted from examination or graduation from an accredited program.

First, animal technicians,
second, small animal technicians, and
third, livestock health attendants.

The large majority of the general comments were favorable, however, there was a wide range of opinion expressed. These have been sorted into pro and con categories as follows:

The pro group held the following general opinions and recommendations for the program: (1) thirty veterinarians indicated that they believed the program was a much needed service to the State; (2) seventeen veterinarians stated that the activities of the graduates of the program must be controlled in some way by the State; (3) twelve veterinarians gave their earnest commendation of the program; (4) seven suggested a shorter length program which stressed typical situation training; and (5) in general, the remaining comments were favorable and pertained to legal questions, upgrading of the profession, or to the problem of low wages offered the graduates.

The con group believed (1) the graduates of the program could not be controlled adequately by the State (seven veterinarians); (2) that a need did not exist for formal training of such auxiliaries (five); (3) it was easier and better for the veterinarian to train his own help (five); and (4) that in general, the wages would not support such a graduate (three).

An analysis was made of the specific pro and con comments in each of the three separate categories of small, mixed and other practitioners. In the pro group (much larger than the con group) it is significant that for each category of veterinary practice, the first rank order comment related to the program for auxiliaries as a much needed service to the State. Both for the mixed and small practice categories, the 2nd ranked comment dealt with the necessity for adequate control of graduates. Generally, the comments which ranked third were commendations of the auxiliaries program. Because 74 out of 84 comments of the small and mixed animal practice categories (or 86%) agreed, a consensus existed and general guidelines concerning the above comments could be developed. Please see Appendix II for a detailed presentation of these comments for the pro group.

The majority of the con group comments (total of 8) related to the fact that these auxiliaries might be "non-controllable"; this view was held by six mixed practitioners and 2 small animal practitioners. The next rank order opinion (total of 5) was that the program was not needed - and that individual veterinarians could train their own auxiliaries. Please see Appendix III for a detailed presentation of the comments for the con group.

An attempt was also made to place all comments into subject areas - and rank order them in a meaningful way. Table 7 identifies 45 specific comments and arranges them into 8 areas, showing the applicability of each to the three veterinary auxiliary occupations.

Table 7

Summary of Comments of Survey Respondents

Categories of Favorable Comments as pertain to:	Number of such Comments	Occupation		
		AT*	SAHA**	LHA***
"Grandfather clause"	15	13	9	8
Re-emphasis of State Board Examination for licensure	9	9	4	4
Certification by State Board	7	6	1	1
Required experience or internship	5	5	0	0
Periodic re-examinations	3	3	2	2
Limiting who may recommend licensure	2	2	1	1
Registration (only)	2	2	1	0
Recommendation of Graduate Veterinarian	2	2	0	0
Total	45	42	18	16

*AT - Animal Technicians

**SAHA - Small Animal Hospital Attendants

***LHA - Livestock Health Attendants

Appendix IV has been added to this report which presents, essentially verbatim, salient general comments regarding veterinary auxiliary occupations and their titles or definitions.

CHAPTER III

DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

7. Discussion and Conclusions

A. The favorable survey response and expressions of 215 practicing veterinarians in the State of Indiana, clearly indicate a strong interest in defining veterinary assistants' or auxiliaries' titles and jobs, as well as in their training and licensure or registration. (There are inadequate related occupational titles and descriptions in the Dictionary of Occupational Titles.)

B. There is general agreement with the title of animal technician at the 2-year college Associate Degree level; and small animal hospital attendant and livestock attendant at the 6 to 9 months vocational/technical training program level. The duties and functions of these auxiliaries also are generally acceptable as presented. However, there were fewer large animal practitioners who responded to the questionnaire, and the data for livestock health attendants are therefore less conclusive.

C. The largest number of job vacancies - and proportionately the highest average annual recurring requirements were reported for animal technicians. It is computed that a minimum of 53 animal technicians are needed each year, from outside training sources, to fill job vacancies and to meet job turnover or expansion requirements - for the 215 Indiana veterinarians who responded to the questionnaire. Inasmuch as this response represents about one-third of all practitioners, the upper parameter of needs may be in the vicinity of 150 animal technicians per year. Undoubtedly, some of these technicians are also needed in a variety of governmental, educational, industrial, and other settings as well. There being no related associate-degree program in Indiana, it is concluded that there is a significant requirement for an animal technician associate-degree level program. The survey data indicate that this program should be accredited. It should be offered in an accredited university or college and the curriculum should be endorsed or accredited by the American Veterinary Medical Association. The graduates would then be enabled to continue their education to the baccalaureate and higher levels.

D. The largest number of jobs, and the second largest number of job vacancies, were reported for small animal hospital attendants. The average annual recurring requirements for these attendants were computed to be 59 per year. Inflating this requirement to reflect all practicing veterinarians in Indiana, brings the upper parameter to about 175 per year. There are undoubtedly needs for these attendants in activities such as education, service or industry. Inasmuch as there is no related program in Indiana, it is concluded that there is a requirement for a small animal hospital attendant 6 to 9 months post-high school vocational training program. This type program falls within the purview of the Indiana Vocational Technical College.

E. The small number of survey responses from large animal practitioners, and the small number of reported job vacancies for livestock health attendants, precludes any important conclusions or recommendations in this category.

F. The salaries reported for animal technicians are low when compared with other 2-year associate degree type technicians, i.e. for nursing. This may be due in part to the lack of experience of Indiana veterinarians as to the value of well trained technicians (no properly trained and certified technicians being available), and it may also reflect a desire on the part of veterinarians to assure themselves that these auxiliaries are not somehow professionally competitive.

G. The proposed occupational titles, duties and descriptions of the animal technician and the small animal hospital attendant are apparently quite acceptable to practicing veterinarians in Indiana. Action is needed to make them official, both within the profession and externally (nationwide).

H. There was strong support for the licensure and/or registration of animal technicians - and an expressed desire for these technicians to be graduates from an accredited college program; there was also support for a State Board Examination to verify their qualifications. The primary methods of determining or assuring qualifications of attendants was the recommendation of a veterinarian - and the graduation from an accredited training program.

I. Most of the comments or accompanying letters were favorable to the idea of identifying and utilizing assistants - the majority of these opinions were to the effect that if the study helped to provide such auxiliaries it was a great service to the state and the efforts were commendable. A relatively few comments expressed opposition, the most cited reason was that these technicians could not be controlled adequately.

Other comments reiterated the needs to employ the "Grandfather Clause" for assistants now employed. Some comments emphasized the needs for examination and certification. These two elements were included in the survey as added comments, and must be interpreted as reinforcement of veterinarians opinions.

J. From the data in the survey and discussion above, it would appear in order for the veterinary profession to consider the establishment of an independent system for the certification and continuing development of technicians somewhat like that now in effect for engineering technicians. In this case, the Institute for the Certification of Engineering Technicians[5] has been developed with the cooperation of professional engineers - and the technicians so certified have formed their own society, the American Society of Certified Engineering Technicians.[6] These are both viable and growing endeavors which give meaningful leadership, direction and assistance in the engineering technician field. A close liaison and cooperative spirit prevail between these engineering technicians and professional engineers; this may provide a successful model for animal technicians and professional veterinarians to consider.

K. The entire matter of identification, training and control of assistants or auxiliaries in veterinary medical practice would be facilitated by the establishment of Advisory Committeeson Veterinary Auxiliaries in the AVMA and in constituent State associations.

8. Recommendations

A. The formal establishment and recognition of the occupational titles and descriptions for animal technicians and small animal hospital attendants by the Indiana Veterinary Medical Association (IVMA), and by American Veterinary Medical Association (AVMA) is urged; they should then be recommended to the Manpower Administration of the U. S. Department of Labor, for inclusion in the next revisions of the Dictionary of Occupational Titles[1] and Occupational Handbook Outlook.[2]

B. A system of certifying, registering or licensing qualified animal technicians is recommended. Each state can do this, however, national policies and guidelines should be developed by the AVMA. A national certification program, - such as a National Register, Directory, or Certification Institute is needed. It is recommended that the State of Indiana proceed immediately with the development of plans for the examination, registration and control of animal technicians who have graduated from an accredited two-year associate degree college level program: these plans should be developed in cooperation with the AVMA. A system should also be developed for the identification and recognition of attendants based upon graduation from an accredited vocational training program and the recommendation of a veterinarian. The "Grandfather's Clause" should be applied to qualified assistants now employed by veterinarians.

C. It is recommended that consideration be given to create a certification system for animal technicians based on the Institute for the Certification of Engineering Technicians. Subsequently, assistance should be given to certified technicians to form a society such as the American Society of Certified Engineering Technicians.

D. The development of educational and training program curricula should be based on national guides, standards and objectives provided by the AVMA's Council on Education. Only those programs that are deemed acceptable after an on-site evaluation should be accredited by the AVMA. College level programs should be conducted under the auspices of regionally accredited institutions of higher learning as recognized by the National Commission on Accrediting.

E. Purdue University's School of Veterinary Science and Medicine, in conjunction with the School of Technology, IVMA & AVMA, should proceed with the planning for curriculum development and actions needed to design and offer an accredited, two-year associate degree program for animal technicians. Further, it is recommended that veterinarians be advised of the fact that comparable level technicians are earning a beginning salary of approximately $460.00 per month.

F. The Indiana Vocational Technical College, in conjunction with Purdue University's School of Veterinary Science and Medicine, IVMA and AVMA, should proceed with the planning for curriculum development and actions needed to design and offer an accredited, 6 to 9 months vocational technical training program for small animal hospital attendants.

G. That this manpower report be used as the basis for beginning the many actions needed to bring about the identification, training, control and utilization of assistants in Indiana's veterinary practice.

APPENDIX I

INDIANA VETERINARY MEDICAL ASSOCIATION

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Dr. Eber H. Allen
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Dr. Fred A. Hall
1501 Ravinia Rd.
West Lafayette, Indiana 47906
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Name and Address of Practicing
Veterinarian in Indiana

SURVEY PACKAGE (Includes)
Letter of Transmittal
Occupational Definitions
Survey Questionnaire

Your advice is needed on a matter which concerns the need for and kinds of non-professional auxiliaries our profession may require. The IVMA Board of Directors is in agreement with the American Veterinary Medical Association's Council on Veterinary Service - which recommends that these supporting occupations be defined. The Council has assumed that a certification procedure could be established. Several states have instituted training programs for auxiliaries which are highly successful. If it is our consensus, we can do the same in Indiana.

The above reasons are behind this survey which is being sent to all Indiana veterinarians. Attached are some tentative occupational titles and descriptions and a brief questionnaire in three parts:

Part I lists three auxiliary occupational titles and asks if you now employ such people - or may need them in the future. It also asks if you agree to the occupational titles or have some suggestions to improve them.

Part II asks for your ideas concerning the control of these auxiliaries, and

Part III is for any related comments or recommendations.

It is hoped that a system can be developed which will provide us with auxiliaries who can increase the effectiveness of our profession. Please cooperate by giving us the benefit of your ideas. If you desire, we will send you a copy of the study results.

Cordially yours,

Eber H Allen

Eber Allen, DVM
President

EA:klm
Attachments

Proposed Occupational Definitions for:
VETERINARY SERVICE NON-PROFESSIONAL AUXILIARIES

As a point of departure, please assume there are two occupational levels below the Veterinarian as shown below:

Occupational Matrix

Occupational Level	Field of Work and Title (Urban) Small Animal	Field of Work and Title (Rural) Large Animal
Sub-Professional	Animal Technician	Animal Technician
Skilled Worker	Small Animal Hospital Attendant	Livestock Health Attendant

The suggested occupational title and description of each follows:

ANIMAL TECHNICIAN

May perform the following duties under the direct supervision of a veterinarian (providing they do not conflict with existing veterinary practice acts):

Take and record vital information relative to a case: this would include such information as the client's name, address, phone, and the case history, temperature, breed of animal, name and identity of the animal, age, sex, etc. Prepare animals for surgery; prepare equipment and medicants to be used in surgery; load, expose, and develop radiographic film; explain recommended routine immunization procedures and costs to clients; explain proper dietary needs in new puppies;catheterize for urinalysis; perform a urinalysis, fecal analysis, and/or blood analysis; draw a blood sample; prepare medicants for dispensing to clients on prescription of the attending veterinarian; prepare and/or administer hypodermic injections under the direct supervision of the attending veterinarian; administer and/or apply medications; assist in giving anesthetics; administer colonic irrigations; apply or change wound dressings; administer parenteral fluids as directed by the attending veterinarian; explain to clients the handling and restraint of pets, including needs for exercise, house training of puppies, and elementary obedience training; clean kennels, exercise runs, and kitchen utensils; prepare food and feed patients; give first aid treatment including the proper use of tourniquets; give first aid treatment of fractures;

preserve blood, urine, and pathological material to be sent to a laboratory; collect and prepare skin scrapings for microscopic examination by the veterinarian; prepare bacteriological smears and simple staining techniques; give general care and supervision of hospital or clinic patients to insure their comfort and well being; trim nails and groom patients; give dental prophylaxis; order drugs, medicines, feed and supplies. Assist the veterinarian in care, restraint, and treatment of livestock. Perform other duties as directed.

The Animal Technician may supervise the work of Small Animal Hospital Attendants or Livestock Health Attendants or may perform functions at that level if/as directed. The Animal Technician will normally be certified and will have an educational level the equivalent to an accredited two-year college (Associate Degree) type program.*

Note: Provisions would be made for certification of qualified, currently employed technicians (grandfather clause),

SMALL ANIMAL HOSPITAL ATTENDANT:

Attends to small animals in a hospital or clinic. Feeds and waters animals and cleans their cages and surroundings. Keeps records of weight and diet as directed. Places animals in or removes them from exercise runs. Cleans and sterilizes cages, runs, pens and surrounding areas; operates autoclaves, steam and/or germicidal solutions. Cleans and sterilizes surgical instruments, syringes, needles, etc. Repairs cages and equipment. Sprays insecticides and spreads powder to exterminate insects. Orders feed and supplies. May remove and cremate dead animals upon direction. Perform other duties as directed.

The educational level of the Small Animal Hospital Attendant is normally the equivalent of a high school graduate with approximately 6 to 9 months post-high school vocational or technical training.

*Consistent with recent policy recommendations of the American Veterinary Medical Association.

LIVESTOCK HEALTH ATTENDANT:

Holds animals on farm. Assists in applying restraints or holding animals. Operates holding chute. Grooms and attends patients. Cleans and sterilizes instruments, syringes, needles, etc. May do some laboratory examinations. Performs other duties as directed.

The educational level of the Livestock Health Attendant is normally the equivalent of a high school graduate with approximately 6 to 9 months post-high school vocational or technical training.

"Mixed Practice" Situations:

Duties and responsibilities of the Small Animal Hospital Attendant and the Livestock Health Attendant are somewhat interchangeable in a "mixed veterinary" practice. The Animal Technician may serve either type practice or a mixed practice.

We would appreciate having your views and advice concerning requirements for these auxiliaries and your suggestions or comments regarding their duties and responsibilities. To facilitate handling the data, please fill out the heading and answer questions in Parts I thru III of the survey beginning on the next page.

Please do not return these descriptive pages.

ANIMAL TECHNICIANS AND ATTENDANTS QUESTIONNAIRE

Name and Address: _____

_____

Kind of Practice: Large Animal_____ Small Animal_____ Mixed_____

Other Employment Category: _____

_____

PART I

A. MANPOWER REQUIREMENTS

	Number now Employed	Present Number of Vacancies[1]	Number you estimate you will need[2] from outside training sources in 1968	1969	1970	Estimate of Approx. Monthly Salary
Animal Technician[3]						
Small Animal Hospital Attendant[4]						
Livestock Health Attendant[4]						
Other[5]						

[1]Indicate number you would hire today in your practice if qualified applicants were available.

[2]Enter number you believe are needed to fill future vacancies (turnover) and new jobs (expansion) in your practice.

[3]Normally, graduates of an accredited two-year, college-level (Associate Degree) educational program.

[4]Normally, graduates of a 6 to 9 months vocational technical training program.

[5]Please identify and explain.

B. OCCUPATIONAL DEFINITIONS

1. Are the occupational definitions and categories in which they are arranged satisfactory? Yes_____ No_____

2. If not, how do you suggest they be changed or improved?

_____

PART II

LICENSURE OF ANIMAL TECHNICIANS AND ATTENDANTS

1. Do you believe any of these auxiliaries should be licensed by the State of Indiana? Yes_____ No_____

If your answer is Yes, which of the following should require licensure?

Animal Technicians	Yes_____	No_____
Small Animal Hospital Attendants	Yes_____	No_____
Livestock Health Attendants	Yes_____	No_____
Other (please identify)	Yes_____	No_____

_____

2. If your answer was yes to any of the above, which of the following methods do you believe are the most applicable to each occupation? You may check more than one column if you believe two or more methods should apply.

Occupation	State Board Type Examination	Graduate of Accredited Program	Recommendation of a Graduate Veterinarian	Other*
Animal Technician				
Small Animal Hospital Attendant				
Livestock Health Attendant				
Other (please name)				

*Please explain: _____

_____

PART III

COMMENTS OR RECOMMENDATIONS

Now that you have a better idea of this study and it's goals - do you have any comments or recommendations?

_____

_____

_____

_____

_____

_____

_____

Please return the three pages of this questionnaire even if you have no requirements for technicians or attendants or ideas concerning the study. Return the survey in the attached envelope to the Indiana Veterinary Medical Association, 5026 Decatur Road, Fort Wayne, Indiana 46806, Attention: Dr. Eber Allen, President. You may keep the proposed occupational definitions.

Many thanks for your cooperation.

APPENDIX II

SUMMARY OF GENERAL COMMENTS BY THE PRO GROUP*

Categories of Related Comments as pertain to:	SMALL				MIXED				OTHER**				Grand Total
	AT[1]	SAHA[2]	LHA[3]	Total	AT	SAHA	LHA	Total	AT	SAHA	LHA	Total	
A needed service	11	5	6	13	12	5	6	12	4	2	2	5	30
Necessity for adequate control of graduates	7	6	6	7	9	4	3	9	1	1	1	1	17
Commendation of the program	4	3	3	5	4	2	3	5	2	1	-	2	12
Shorter program-typical situation training	6	3	2	6	1	-	-	1	-	-	-	0	7
Low wages paid to auxiliaries	1	-	-	1	3	2	2	3	-	-	-	0	4
Up-grading of the profession	1	-	-	1	1	1	1	1	1	-	-	1	3
Legal questions	2	1	1	2	1	1	1	1	-	-	-	0	3
Other positive comments	2	2	2	2	3	4	4	5	1	-	-	1	8
			Total	37			Total	37			Total	10	84

[1]AT - Animal Technician

[2]SAHA - Small Animal Hospital Attendant

[3]LHA - Livestock Health Attendant

*Veterinarians in favor of the auxiliary project.

**Includes Large Animal Practioners.

APPENDIX III

SUMMARY OF GENERAL COMMENTS BY THE CON GROUP*

Categories of Related Comments as Pertain to:	SMALL				MIXED				OTHER**				Grand Total
	AT[1]	SAHA[2]	LHA[3]	Total	AT	SAHA	LHA	Total	AT	SAHA	LHA	Total	
Graduates being non-controllable	1	2	2	2	6	5	5	6	-	-	-	0	8
Lack of need of the program	1	1	1	1	3	2	2	4	-	-	-	0	5
Added government expense	-	-	-	0	-	2	2	2	-	-	-	0	2
Individual veterinary training	1	2	2	2	3	3	3	3	-	-	-	0	5
Other negative comments	1	1	1	1	2	1	1	2	-	-	-	0	3
			Total	6			Total	17			Total	0	23

[1]AT - Animal Attendant

[2]SAHA - Small Animal Hospital Attendant

[3]Livestock Health Attendant

*Veterinarians with reservations concerning the auxiliary project.

**Includes Large Animal Practioners.

APPENDIX IV

SELECTED COMMENTS OF VETERINARIANS CONCERNING AUXILIARIES

A selection of the more salient general comments are as follows:

"In the beginning, there will be some cases or an individual may have worked with a veterinarian and have considerable experience. In this case, I believe they need not be a graduate of an accredited program. They should have a state board examination of course."

"I feel that, in general, any graduate of an accredited program should be licensed without the ritual of a state board type exam. Graduates who prove themselves incompetent or irresponsible should be subject to review by a qualified board following complaint to the review board."

"After initial license period - there should be re-examination at periodic intervals (e.g. 5 years)."

"In the case of help that has been trained for a number of years by a graduate veterinarian, I think some type of license could be adopted in view of a certain number of years on the job training (e.g. 5 years)."

"I believe only a graduate veterinarian that belongs to the Small Animal Hospital Association or equivalent practices association, should be able to recommend for these auxiliaries."

"For the animal technician, I believe the recommendation of a graduate veterinarian would only be valid after an 'internship' of say 6 months."

"For the animal technician category, I believe this person should be a graduate of an accredited program; however, an exception is the 'grandfather clause' as previously outlined in your questionnaire."

"If the technician has been employed 5 or more years by a vet and has been taught proper methods, etc. he or she should be qualified to become a technician; otherwise, should have lab and care of animals training, etc. in an accredited school."

"If employed, should have the support of the employing or supervising veterinarian. Recommendation by a past employer might or might not be valid."

"I think that the animal technician should work for a veterinarian for 1 year before licensing. The exam could be taken immediately after finishing the course and licensed only after working for a veterinarian for one year."

"State Board type examination for the animal technician should be similar to the nursing exam."

"State Board type examination for the animal technician should be required if he is not a graduate of an accredited program."

"I feel that initial licensure should be by a state board type of exam for which only recognized graduates should be eligible. Subsequent license renewals should require recommendation by graduate practicing veterinarian."

The following are some typical comments as concern <u>occupational definitions:</u>

"Animal Technicians should be termed Veterinary Nurse. The Hospital Attendant category is good."

"We would suggest changing the title of 'Animal Technician' to 'Veterinary Nurse'."

"Animal Technician should be called Veterinary Technician."

"Make the people entitled a registered animal nurse, RAN, then people would understand their limitations as to diagnostic abilities: similar to RN."

"Might be advisable to include, at least by reference, allied areas where these people could also be used."

"The four categories are directed entirely to practice situations and cannot accurately describe or define the position of Animal Caretakers or Animal Technicians in laboratory situations."

"I prefer the title 'veterinary nurse' to that of 'technician'."

"They are OK, but a category for a one man mixed practice is needed also. Any training program should include training for general practice."

"Eliminate animal technician. This post is only a composite of a Medical Technician + Hospital Attendant + Receptionist and Bookkeeper."

"Duties of lay help are so variable that it would appear to be practically impossible to compile a standard job description."

SELECTED BIBLIOGRAPHY AND NOTES

Reference Number	Title
1.	Dictionary of Occupational Titles, Third Edition, 1965, Volumes I and II, Manpower Administration, U. S. Department of Labor.
2.	Occupational Outlook Handbook, 1966-67 Edition, Bulletin No. 1450, Bureau of Labor Statistics, U. S. Department of Labor.
3.	The job title of "animal technician" is consistent with recommendations of a joint meeting of interested professional veterinary groups held 30 November 1967 as recorded in "Report of the Committee on Non-professional Assistance, American Veterinary Medical Association Executive Board, April 1, 1968, Agenda Item 6 (g)".
4.	The duties of animal technicians are based on "Guidelines for Non-professional Assistants in Animal Hospitals" developed by the Council on Veterinary Service and sent to the Board of Governors of the AVMA in letter of 13 October 1967, Subject: Training of Non-professional Assistants.
5.	The Institute for the Certification of Engineering Technicians is sponsored by the National Society of Professional Engineers. The Institute is an examining body only and performs the function of determining the competency of those who voluntarily apply for certification: the Institute's address is 2029 K Street, N. W. Washington, D. C. 20006.
6.	The American Society of Certified Engineering Technicians objectives include the recognition and improvement of the services of it's members; establishment of cooperative relations with engineering and scientific societies; development of methods to improve utilization of engineering technicians, development and dissemination of information and services to increase their competence; and the promotion of their educational, social, economic and ethical responsibilities. Applicants for membership must be certified by the Institute for the Certification of Engineering Technicians. Offices of the Society are 2029 K Street, N. W., Washington, D. C. 20006.

MANPOWER STUDIES, REPORTS AND SURVEYS
THE SCHOOL OF TECHNOLOGY - PURDUE UNIVERSITY

Number	Title	Date
65-1	Industrial Survey 201, Specifications for the Baccalaureate Graduate (Out of Print)	January 1965
65-2	Engineering Technicians - Production and Requirements (Out of Print)	15 June 1965
65-3	Technician-Level Educational Planning Concerning the Chemical Technology in Indiana	20 Oct. 1965
	********	
66-1	Technician-Level Educational Planning Concerning the Electrical Electronic Technology in the Greater Lafayette Area (Tippecanoe County, Indiana)	January, 1966
66-2	Employment Trends in Five Indiana Counties (Allen, Lake LaPorte, Marion, and Porter)	1 Feb. 1966
66-3	Occupations, Worker Traits and Qualifications, and Areas of Work in Architectural, Construction and Related Fields for Jobs Above the Skilled Craftsman Level	10 March 1966
66-4	Foundry Technicians and the Foundry Industry in Indiana	30 March 1966
66-5	Employment Trends and Technician Needs in Wayne County, Indiana (and Four Contiguous Counties)"The Richmond Study"	4 April 1966
66-6	Methods and Rationale for Determining Technician-Level Manpower Requirements by Locale, and for a Specific Industry	20 July 1966
66-7	Selected Technical Education Needs in Howard County, Indiana "The Kokomo Study"	1 August 1966
66-8	Selected Manpower and Employment Data for Delaware County, Indiana (and the Six Contiguous Counties)"The Muncie Study"	15 Aug. 1966
66-9	Region One Manpower Study (Northwest Corner of Indiana)	18 Oct. 1966
66-10	Manpower and Training Needs in Fluid Power for Indiana Industries	30 Nov. 1966
	********	
67-1	Manpower Requirements for Industrial Illustrators and Draftsmen in the Indianapolis, Indiana Area	10 April 1967
67-2	Computer and Electronic Data Processing Manpower Requirements for Indianapolis, Indiana	10 May 1967
67-3	Manpower Requirements for Industrial Illustrators and Draftsmen in the Calumet, Indiana Area	15 June 1967
67-4	Manpower Requirements for Industrial Illustratoss and Draftsmen in Fort Wayne, Indiana	1 August 1967
67-5	Computer and Electronic Data Processing Manpower Requirements for the Calumet, Indiana Area	20 Sept. 1967
67-6	Computer and Electronic Data Processing Manpower Requirements for Fort Wayne, Indiana	25 Oct. 1967
67-7	Requirements for Personnel Staff Members and Supervisors in the Northeast Region of Indiana	28 Dec. 1967
	********	
68-1	Computer and Electronic Data Processing Manpower Requirements in Kokomo, Indiana	1 March 1968

Note: Copies of these reports are available for $1.50 per copy (Indiana Government and Educational offices exempted). Please make check payable to Purdue University.

THE OFFICE OF MANPOWER STUDIES
and the
POLICY GUIDANCE COMMITTEE

On April 15, 1964, the BOARD OF TRUSTEES created The School of Technology and authorized the Dean to establish "...an administrative organization to conduct educational research and manpower studies to provide the necessary basic data and information concerning the growing and changing needs and demands for technologically oriented education and programs." The Office of Manpower Studies was activated in response and was assigned two functions:

(1) to establish and operate a continuing survey of manpower requirements and trends in Indiana in order that educational and training agencies can better prepare people for employment opportunities; and

(2) to encourage research activity in the University, aimed at solving problems and developing understandings of a more fundamental nature in the manpower and training field.

With the concurrence of the Vice President for Research, an Interdisciplinary Policy Guidance Committee of the Office of Manpower Studies was formed to further develop the concept of the office and to help identify the broad avenues of research that should be pursued. Membership of this committee includes:

G. W. McNelly, Chairman (Dean of the School of Technology)

J. P. Lisack, Secretary (Director, Office of Manpower Studies)

J. S. Day (Industrial Management)

E. M. Eddy (Industrial Education)

C. E. French (Agricultural Economics)

R. J. Grosh (Engineering)

E. J. McCormick (Psychology)

L. Z. Breen (Sociology)

D. Sams (Technology)